

EXHIBIT E

SUPPLEMENTAL EXPERT WITNESS REPORT**of****MICHAEL SCUELLO.****April 16, 2021**

This supplemental report presents a response to Dr. Jacob Vigdor’s testimony at his deposition on January 20, 2020, which I attended by video- link, and the Expert Witness Report of Jacob L. Vigdor, Ph.D. dated August 24, 2020 (the “Report”). In the Report, Dr. Vigdor used the wrong column when comparing offers made to Asian students in 2020 to offers that would have been made using alternative admissions algorithms (Tables 8—12). Specifically, he used the column of data that indicates whether a student received an “invitation” to the Discovery program, rather than an “offer” to the Discovery program. As discussed below, some “invitations” to the Discovery program are extended to students who are not, in fact, eligible for the program—because even though the student attends a school with a high ENI, their families are not individually disadvantaged. On the other hand, “offers” are only extended to students the DOE has certified as eligible.¹

An examination of the offers actually made through both SHSAT score and Discovery program demonstrates that, between 2018, the last year prior to the Discovery program expansion, and 2020, the first year of the fully expanded Discovery program, the percentage of seats offered to Asian students at the Specialized High Schools *increased both overall and at each of the eight Specialized High Schools*. This demonstrates that, when the actual data are reviewed, Asian students fared better in 2020 than in 2018. Additionally, an examination of the available data does not support Dr. Vigdor’s claim that failing to list Stuyvesant as a first choice harms Asian students, nor does it support his claim that there is a linear relationship between the number of schools listed as choices and an Asian student’s chances of obtaining an offer.

A. Invitations vs. Offers to the Discovery Program

Families of students who *may* be eligible for the Discovery program receive an “invitation” letter. The letter informs the parent that their child may be eligible to attend, they must submit an application to the school, and that acceptance into the Specialized High School requires enrollment in and satisfactory completion of the Summer Discovery Program before matriculating. If the New York City Department of Education (“DOE”) has records indicating the family meets criteria for being individually disadvantaged, the family is not required to submit documentation establishing the family meets the disadvantage criteria. However, if the DOE does not have records that establish the family meets the individual disadvantage criteria, the family is asked to submit this documentation along with the application to the student’s school counselor. “Offers” to the Discovery program are made to students whose middle school

¹ There is no dispute that students are eligible for the Discovery program only if (1) they attend a school with an ENI at 60 or higher, *and* (2) their families are individually disadvantaged. *See* Report, p. 5.

counselor or principal certifies that the student is recommended for the Summer Discovery Program and who are certified as having met the individual disadvantage eligibility criteria (or the DOE has previous information that the individual criteria have been met), and the family has submitted an application.

In the individual level data that Defendants provided to Plaintiffs, there is a column in the spreadsheet entitled “Invitation to Discovery” and another column entitled “Approved to Participate in Discovery.” At his deposition Dr. Vigdor testified he was not certain which column he used in his analyses. *See* Vigdor Dep. 107:17-110:2. Notably, Dr. Vigdor’s testimony demonstrated he did not understand that some “invitations” were extended to students who were in fact *not* eligible for the program. *Id.* 107:20-108:1.

In Tables 8 through 12 in the Report (pp. 14-19), the analyses compare what Dr. Vigdor called “admission slots” that were “awarded” to Asian students in 2020 to those that would have been awarded to Asian students had the 2018 criteria been employed. However, when running these simulations, Dr. Vigdor appears to have used the data from the column entitled “Invitation to Discovery” program, not the column “Approved to Participate in Discovery.” I have verified this by comparing summary statistics I calculated from the raw data to the summary statistics presented in the Report. For example, Table 11 in the Report shows that 50.1% of offers to Brooklyn Tech in 2020 were proffered to Asian students, 7.5% to Black students, 9.4% to Hispanic students, and so forth. These figures are consistent with the summary statistics I developed from the “Invitation to Discovery” column for Brooklyn Tech. I similarly compared summary statistics I generated using the “Invitation to Discovery” column in the remaining seven schools and all schools combined, and these results are the same as the numbers Dr. Vigdor reports in the first column of Tables 8, 9, 10, and 12 of the Report. Correspondingly, the summary statistics I generated using the “Approved to Participate in Discovery” column did not match any of the summary statistics presented in the Report.

B. Between 2018 and 2020 the Percentage of Seats offered to Asian Students at the Specialized High Schools Increased both Overall and at Each School

In Table 1 I have looked at the percentage of all seats offered through SHSAT score *or with an approved offer* through Discovery to Asian Students in 2020, 2019, and 2018, as well as the difference in the percentage of seats offered to Asian students between 2018 and 2020. *This table demonstrates that (1) at each school a higher percentage of offers went to Asian students in 2020 than in 2018; and (2) correspondingly, a higher percentage of the total offers went to Asian students in 2020 than in 2018.* That is, in 2020 54.8% of the offers made through both the SHSAT score and the Discovery program were to Asian students; in 2018, 52.2% of such offers went to Asian students; thus, there is a 2.6 percentage point difference. As Dr. Vigdor pointed out in his deposition, since these figures were established using the entire population of NYC SHSAT takers (i.e., population parameters rather than sample statistics), tests of statistical significance are not required to determine whether the observed differences between 2018 and 2020 were due to chance. *See* Vigdor Dep. 93:3-94:21.

Table 1. Percentage of all seats offered through SHSAT score or with an approved offer via Discovery to Asian Students

School	2020	2019	2018	Pct Pt Diff 2020 - 2018
Bronx High School of Science	57.2%	58.3%	56.9%	0.3
Brooklyn Technical High School	51.6%	50.6%	50.0%	1.5
High School for Mathematics, Science, and Engineering at City College	25.1%	25.6%	20.7%	4.4
High School of American Studies at Lehman College	22.8%	14.8%	19.5%	3.3
Queens High School for the Sciences at York College	81.5%	80.8%	80.5%	1.0
Staten Island Technical High School	66.9%	49.6%	48.0%	18.8
Stuyvesant High School	68.6%	67.0%	68.3%	0.3
The Brooklyn Latin School	43.4%	37.1%	39.9%	3.5
All Schools	54.8%	52.5%	52.2%	2.6

In Table 2 I have looked at the percentage of all seats offered a through SHSAT score or with an *invitation* to Discovery that were to Asian Students in 2020, 2019, and 2018, as well as the difference in the percentage of seats offered to Asian students between 2018 and 2020. This table uses the data that Dr. Vigdor used, i.e., “invitations” to the Discovery program. These findings are largely consistent with the findings from the table above that uses the proper data. Here, as in Table 1, a higher percentage of seats were offered to Asian students in 2020 than in 2018 when looking at all schools (an increase of 2.5 percentage points between 2018 and 2020). The key difference between Table 1 and Table 2 is that using this (incorrect) data, Asian students received a slightly lower percentage of offers at Bronx Science and Stuyvesant in 2020 than 2018. This is consistent with Dr. Vigdor’s analysis in which Bronx Science and Stuyvesant were the *only* two schools in which a lower percentage of offers were conferred on Asian students in 2020 than would have been if the DOE used the 2018 algorithm (a difference of 0.7 percent of offers to Stuyvesant, and 1.4 percent of offers to Bronx Science). *See* Vigdor Report, Table 9 (p. 16), and Table 10 (p. 16).²

² For the same reason as discussed above, tests of statistical significance are not required to determine whether the observed differences between 2018 and 2020 were due to chance.

Table 2. Percentage of all seats offered through SHSAT score or with an invitation via Discovery to Asian Students*

School	2020	2019	2018	Pct Pt Diff 2020 - 2018
Bronx High School of Science	55.8%	56.9%	56.0%	-0.1
Brooklyn Technical High School	50.1%	50.0%	48.5%	1.6
High School for Mathematics, Science, and Engineering at City College	24.1%	23.2%	21.0%	3.1
High School of American Studies at Lehman College	21.0%	13.9%	19.4%	1.6
Queens High School for the Sciences at York College	78.8%	78.7%	78.3%	0.5
Staten Island Technical High School	60.8%	48.2%	44.7%	16.2
Stuyvesant High School	66.9%	66.7%	67.2%	-0.3
The Brooklyn Latin School	42.7%	42.7%	39.5%	3.2
All Schools	53.0%	51.5%	50.5%	2.5

* Dr. Vigdor used these figures for his report

In Table 3, I have looked at the percentage of seats in 2020 that were offered to Asian students based solely on SHSAT score, approved offers to the Discovery program, and invitations to the Discovery program. Notably, Asians received a higher percentage of offers via the Discovery program (58.9%) than they did through SHSAT score alone (54.0%). These numbers indicate that the Discovery program benefited Asian students.

Table 3. Percentage of all seats offered to Asian students in 2020

via SHSAT Score Only (N=4,265)	Approved Offer via Discovery Only (N=820)	Invitation via Discovery Only* (N=1,349)
54.0%	58.9%	49.7%

* Dr. Vigdor used these figures for his report

C. Listing Stuyvesant as a First Choice, Number of School Choices, and Seat Offers

In the Report, Dr. Vigdor claimed that (1) failing to list Stuyvesant as a first choice decreased the chances for Asian students to obtain an offer to any Specialized High School; and (2) listing fewer school choices also decreased the chances for Asian students to obtain an offer—and that this relationship is linear; that is, the “Asian students reduced their chances [of obtaining an admission slot] by 0.4 percentage points for every Specialized High School left off their ranked list.” Report, p. 25. The analyses I conducted do not support these claims that this behavior reduced Asian student’s chances of obtaining a seat.

First, it is notable that between 2018 and 2020 Asian students were offered an almost identical numbers of seats in the Specialized High Schools despite the fact that there were fewer seats available in 2020 than 2018 (there were 261 fewer approved offers in 2020 than 2018, and 286 fewer invitations in 2020 than 2018). In 2020, 2,788 Asian students were offered a seat through

SHSAT score or an approved Discovery offer vs 2,792 in 2018, a reduction of only 4 seats. Likewise, according to the invitation data (which were analyzed by Dr. Vigdor), 2,975 Asian students were offered a seat in 2020 vs 2,980 in 2018, a reduction of only 5 seats.³ This is significant because, as discussed below, while Asian students may have been less likely to list Stuyvesant as a first choice, and may have listed fewer school choices, the consistent number of Asian students admitted to the Specialized High Schools indicates that any such behaviors did not in fact harm them.⁴ Had such behaviors harmed Asian students we would expect to see significantly fewer Asian students with offers in 2020 than 2018.

In Table 4, I have reviewed the proportion of Asian students offered seats based on whether they listed Stuyvesant as their first choice. Whether using the approved offer or “invitation” data, larger proportions of seats went to Asian students who *did not* list Stuyvesant as their first choice in 2020 than in 2018. That is, whereas 41.9% of Asian students who received a seat in 2018 did not list Stuyvesant as their first choice, 46.3% of Asian students who received a seat via SHSAT score *or an approved offer* through Discovery in 2020 did not list Stuyvesant as their first choice (a 4.5 percentage point increase). The results were similar when I examined the “invitation” data: while 40.3% of Asian students who received a seat in 2018 did not list Stuyvesant as their first choice, this number increases by 4.2 percentage points to 44.6% based on those students who received a seat via SHSAT score or Discovery “invitation”.

Table 4. Proportion of Asian students offered a seat in a specialized HS who did not list Stuyvesant as first choice

Metric	2020	2019	2018	Pct Pt Diff 2020-2018
Offered a seat through SHSAT score or with an approved offer via Discovery	46.3%	44.0%	41.9%	4.5
Offered a seat through SHSAT score or with an invitation to Discovery*	44.6%	42.8%	40.3%	4.2

* Dr. Vigdor used these figures for his report

In Tables 5 and 6, I have examined Asian students who were offered seats at the Specialized High Schools, broken down by the proportion of seats offered to Asian students based on the number of school choices they listed; Table 5 presents the proportion of seats offered based on SHSAT score or an approved Discovery offer and Table 6 presents the proportion of seats offered based on SHSAT score or a Discovery “invitation”. From both tables, it is clear that the greatest proportion of seats go to the students who list all 8 schools, but this proportion shrinks between 2018 and 2020, despite the fact that the number of overall seats offered to Asian

³ The reason that the number of Asian students who received offers and invitations decreased slightly from 2018 to 2020, while the percentage of offers and invitations that went to Asian increased from 2018 to 2020 is that the number of seats available at the Specialized High Schools was lower in 2020 than in 2018.

⁴ While I do not believe Dr. Vigdor presents convincing evidence that these “behavioral changes” were due to the publicization of the changes to the Discovery program, my analysis of this issue is presented in my Expert Report dated December 23, 2020.

students remains relatively constant. Looking at Table 5, whereas 41.9% of Asian students receiving a seat based on SHSAT score or an approved offer in 2018 listed all 8 schools, this proportion shrinks by 5.1 percentage points to 36.8% in 2020. The “invitation” data, presented in Table 6 show the same downward trend: 42.3% of seats offered to Asian students went to students who listed all 8 schools in 2018 compared to 37.4% in 2020, a reduction of 4.9 percentage points.

Table 5. Proportion of Asian students offered a seat through SHSAT score or with an approved offer via Discovery based on number of choices (i.e., schools) listed

# Schools Listed	2020 (N=2,788)	2019 (N=2,804)	2018 (N=2,792)	Pct Pt Diff 2020-2018
8	36.8%	41.4%	41.9%	-5.1
7	3.9%	4.1%	3.5%	0.4
6	4.5%	5.1%	5.2%	-0.7
5	10.4%	10.4%	10.6%	-0.3
4	16.2%	14.8%	13.9%	2.3
3	17.5%	15.3%	15.6%	1.9
2	8.7%	7.5%	7.6%	1.1
1	2.1%	1.5%	1.6%	0.5

Table 6. Proportion of Asian students offered a seat through SHSAT score or with an invitation via Discovery* based on number of choices (i.e., schools) listed

# Schools Listed	2020 (N=2,975)	2019 (N=2,948)	2018 (N=2,980)	Pct Pt Diff 2020-2018
8	37.4%	41.3%	42.3%	-4.9
7	3.9%	4.2%	3.6%	0.3
6	4.6%	5.1%	4.9%	-0.4
5	10.4%	10.2%	10.7%	-0.4
4	15.7%	14.7%	13.7%	2.0
3	17.3%	15.3%	15.5%	1.8
2	8.7%	7.5%	7.6%	1.1
1	2.1%	1.7%	1.6%	0.5

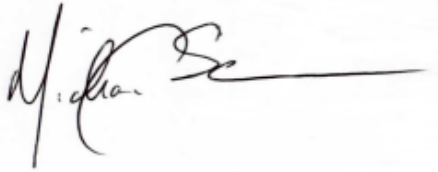
* Dr. Vigdor used these figures for

Further, there does not appear to be a linear relationship between the number of schools an Asian student lists and their chances of obtaining a seat at any of the Specialized High Schools. When a lower percentage of Asian students list all 8 schools, then, by definition, the percentage of Asian Students who list 1-7 schools must increase. If the relationship between number of schools listed and seat acquisition were linear, we would expect to see students listing more schools receiving proportionally more offers. Here, looking at Tables 5 and 6, we see that a higher percentage of Asian students receiving offers listed 4, 3, or 2 schools in 2020 than in 2018,

regardless of whether we examine “approved offers to Discovery” or “invitations”. Indeed, the proportion of seats offered to students listing 4, 3, or 2 schools increased over one percentage point between 2018 and 2020 irrespective of metric.

In conclusion, the data appear to support Dr. Vigdor’s findings that fewer Asian students may have listed Stuyvesant as a first choice and fewer Asian students listed all 8 schools as choices; however, given that between 2018 and 2020 the number of Asian students offered seats was consistent, these decisions do not appear to have harmed Asian students’ chances of obtaining a seat. If not listing Stuyvesant and listing fewer schools had an adverse effect, we would expect significantly fewer Asian students to be offered a seat in 2020 than 2018—which did not occur. Additionally, data appear to indicate that simply listing more schools is not linearly related to the chance of acquiring a seat. In sum, the current data do not support Dr. Vigdor’s conclusion that listing fewer school choices or not listing Stuyvesant as first choice has a detrimental effect on an Asian student’s chance of obtaining a seat offer.

Signed,

A handwritten signature in black ink, appearing to read "Michael Scuello", followed by a long horizontal line.

Michael Scuello
Senior Associate
Metis Associates, Inc.